

KPI's for AE Firms: Benchmarking for Performance

working *on* the business *not in* the business

PRESENTED BY:

Kate Allen Director AE Advisory
Jennifer Knox AE Advisory Consultant

Meet Your Presenter(s)



Kate Allen,

PE, MBA

Director, AE Advisory



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AE Advisory Consultant



1. Establish a baseline by benchmarking your performance to similar firms.
2. Elevate your strategy for performance improvement, using anticipatory thinking.
3. Leverage key performance indicators as a method of keeping score and tracking your efforts.

Polling Question

How many KPI's (key performance indicators) does your firm rely on?

- 0 – 5
- 5 – 10
- 10 – 15
- More than 15
- We don't use KPI's

The “WHY”

a tool in planning for the future

Planning for the Future

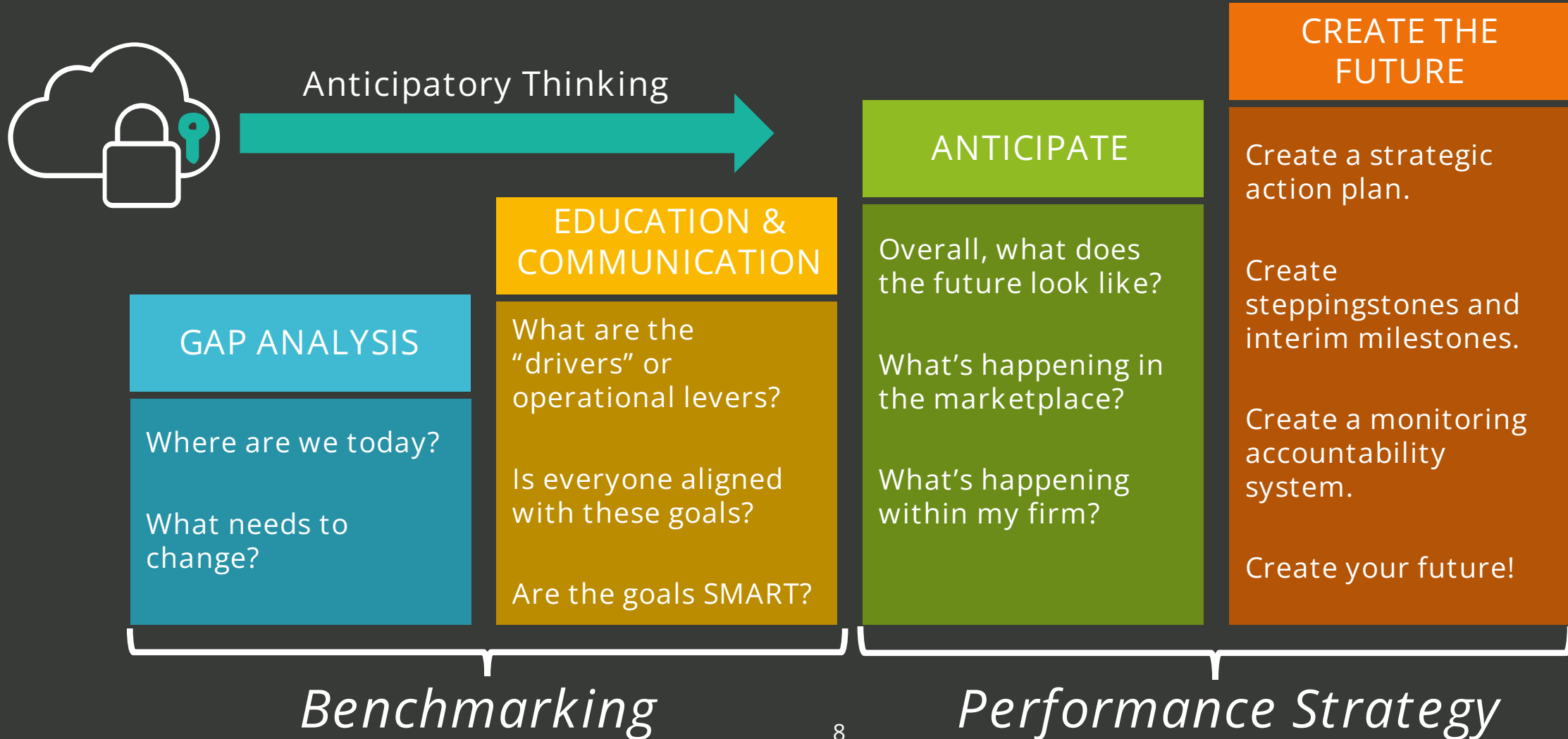


Benchmarking

Planning for the Future



Planning for the Future



Polling Question

Which of the following is NOT necessary for good benchmarking practices?

- Good data collection (your firm's data)
- Any source will do for benchmarking data
- Only use as many KPI's as necessary
- Using benchmarking data to understand where your firm is today
- I'm not sure

Best Practices

one size does not fit all

6 Best Practices of Benchmarking

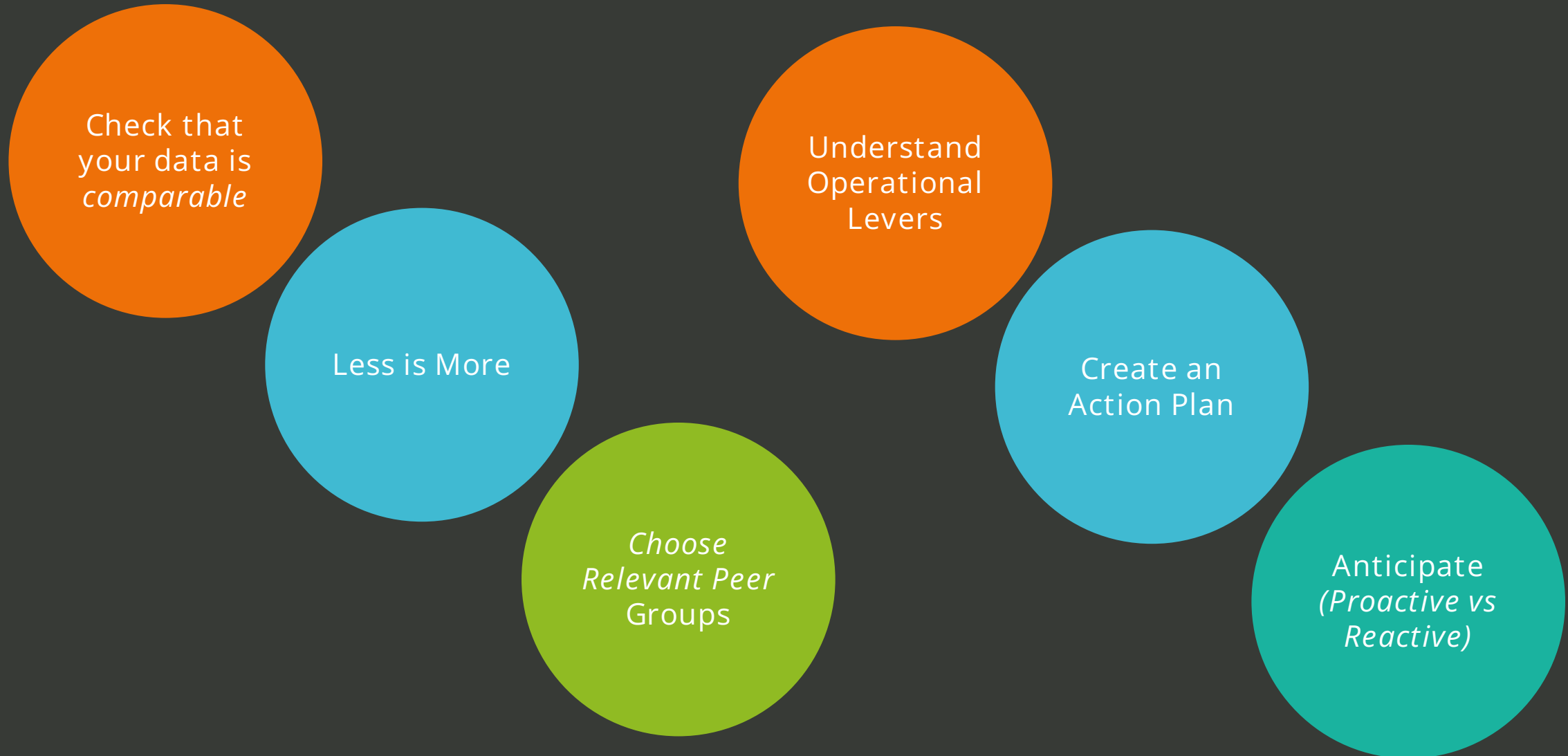


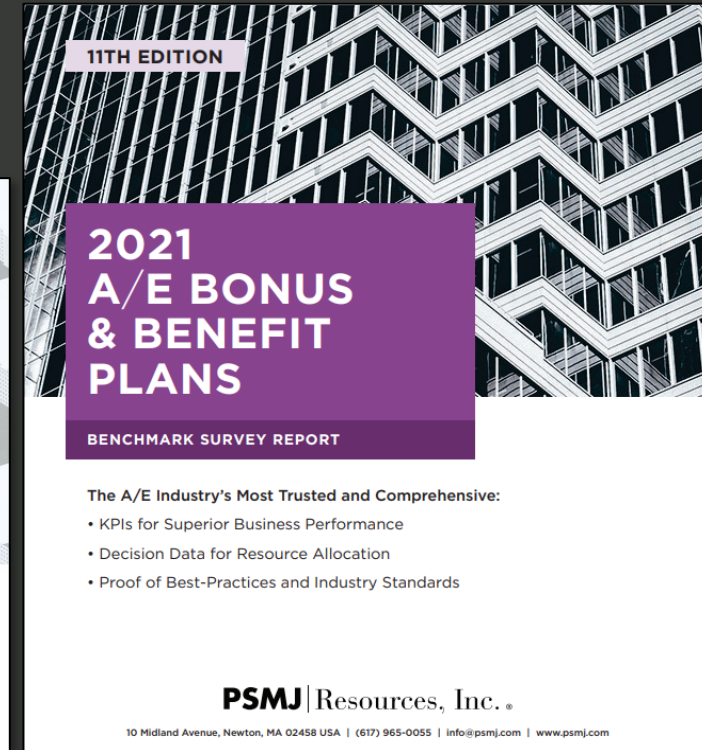
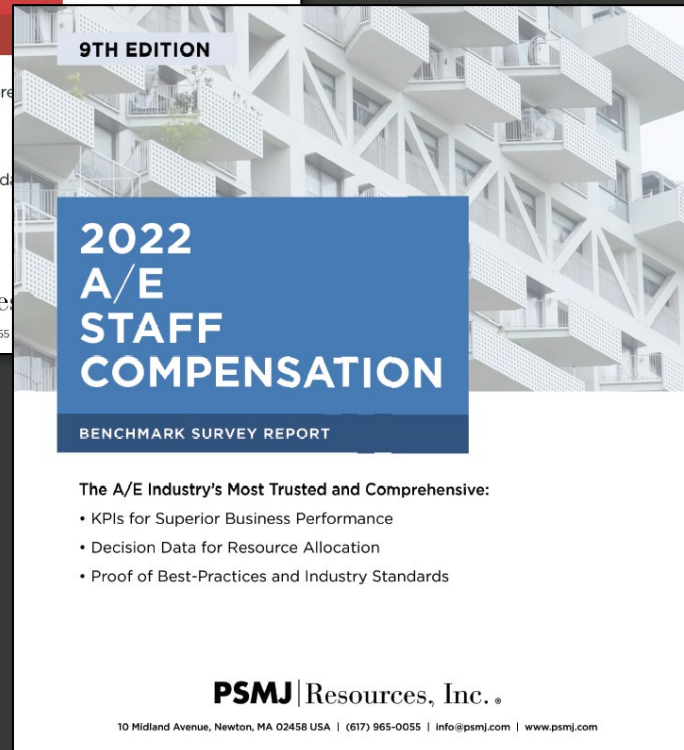
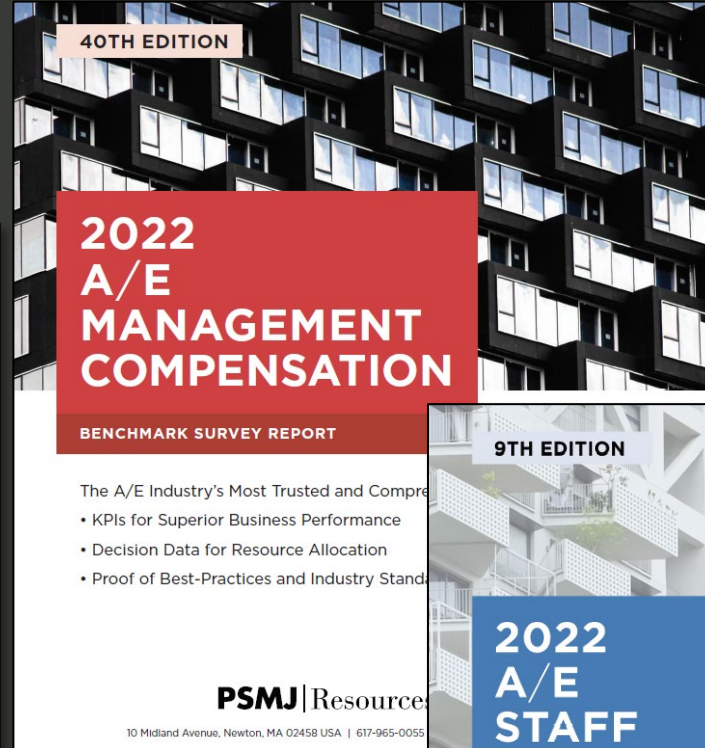
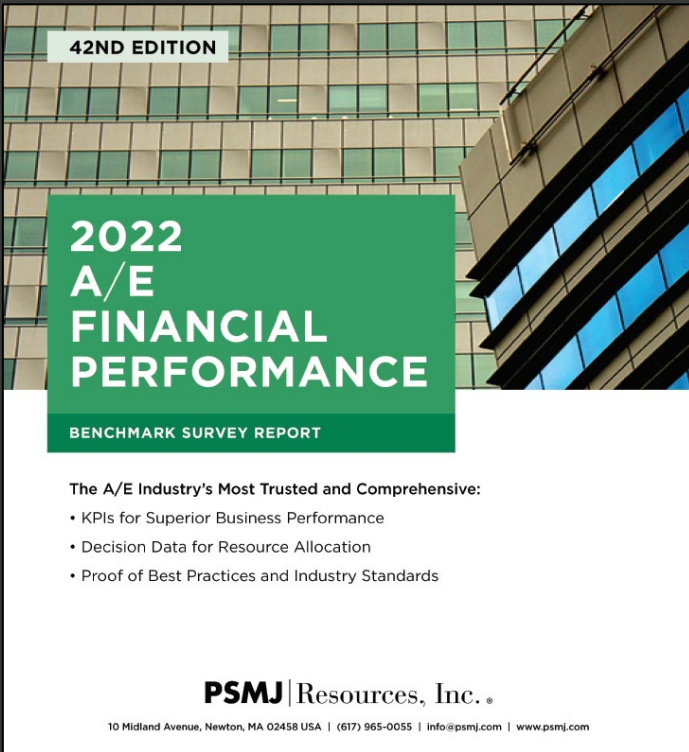
Check that
your data is
comparable

Less is More

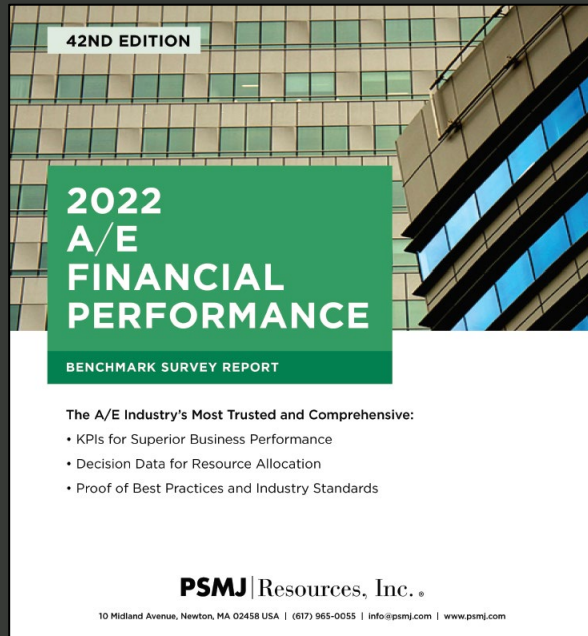
*Choose
Relevant Peer
Groups*

6 Best Practices of Benchmarking

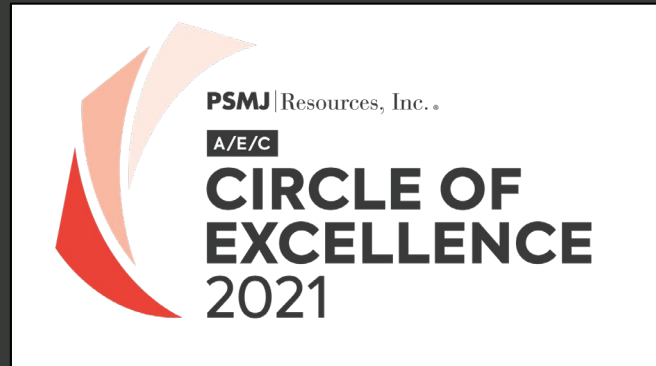




PSMJ Circle of Excellence



2021 FYE Data
2022 Report Date



Top 20%
High Performing Firms

Encompasses critical aspects of business operations:

- ✓ cash flow control
- ✓ overhead control
- ✓ business development
- ✓ revenue growth
- ✓ project performance
- ✓ staff utilization/retention
- ✓ overall profitability

Deltek Clarity



Deltek Clarity – High Performers



High Performers

- ✓ > 3.0 net labor multiplier
- ✓ > 15% profit as a percentage of net revenue

14% of
Study Participants

Zweig



Choose Your Peers: PSMJ

FIRM SIZE

PRACTICE AREA

LOCATION

CLIENT TYPE

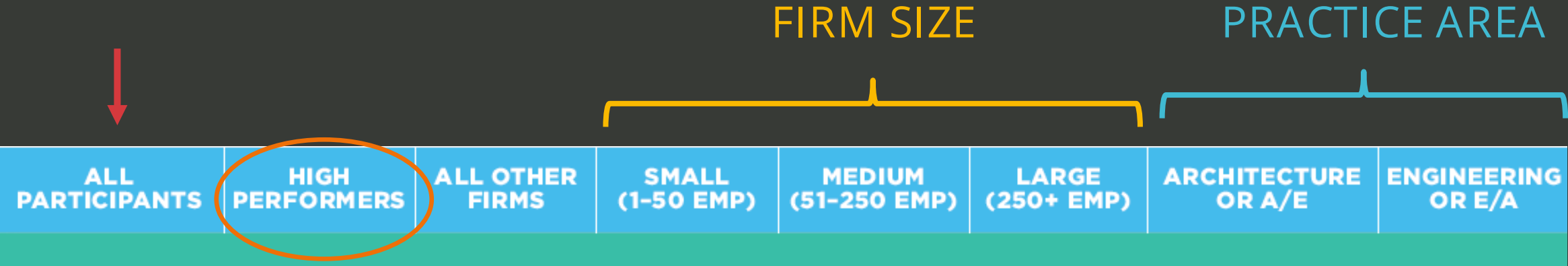
MARKET

Table 31
Operating Overhead Rate (Before Incentive/Bonus)

	Overhead Rate Before Incentive/Bonus Payments & Taxes			
	25 th Percentile	Median	Mean	75 th Percentile
Overall	135.7%	163.6%	165.1%	188.8%
Staff Size 1 to 20	116.0	160.9	166.6	205.8
Staff Size 21 to 50	132.3	163.8	167.0	199.0
Staff Size 51 to 100	136.0	157.7	163.4	188.5
Staff Size 101 to 200	135.3	161.5	165.1	187.3
Staff Size 201 to 350	148.3	167.6	161.2	183.7
Staff Size 351 to 750	150.4	165.5	166.5	177.2
Staff Size over 750	141.8	160.3	167.9	194.6
Architectural	154.0	177.2	187.8	203.6
Architectural/Interiors	144.6	163.8	177.2	202.4
Engineering (Prime)	133.5	160.7	156.6	176.8
Engineering (Subconsultant)	118.6	148.0	146.5	174.6
Engineering (Survey)	133.0	151.8	160.1	183.8
A/E	141.9	172.1	167.6	194.0
Environmental	165.5	207.0	194.0	223.3
All U.S.	119.7	159.8	163.2	200.7
Northeast	152.8	174.4	186.8	213.3
South	139.8	161.4	166.1	187.5
Midwest	141.8	171.2	171.7	197.8
Southwest	152.8	175.5	168.7	187.1
Mountain	136.6	154.8	156.6	175.4
West	138.6	158.0	159.4	179.5
Canada	108.3	119.8	122.3	129.3
Private	131.0	155.8	164.7	194.9
Government	135.6	164.1	164.8	186.9
Mixed	146.1	168.1	166.2	184.1
Transportation	126.6	154.7	158.3	186.1
Water/Wastewater	150.0	162.6	162.1	177.0
Industrial	118.5	140.3	150.3	152.3
Energy-Utilities	190.9	197.8	207.7	209.9
Commercial Users/Developers	137.5	159.8	168.4	202.1
Education	152.6	180.6	186.2	210.5
Housing	128.1	149.0	152.0	179.1
Healthcare	166.7	183.8	195.5	214.7
No Specialty	135.4	163.4	162.2	184.1

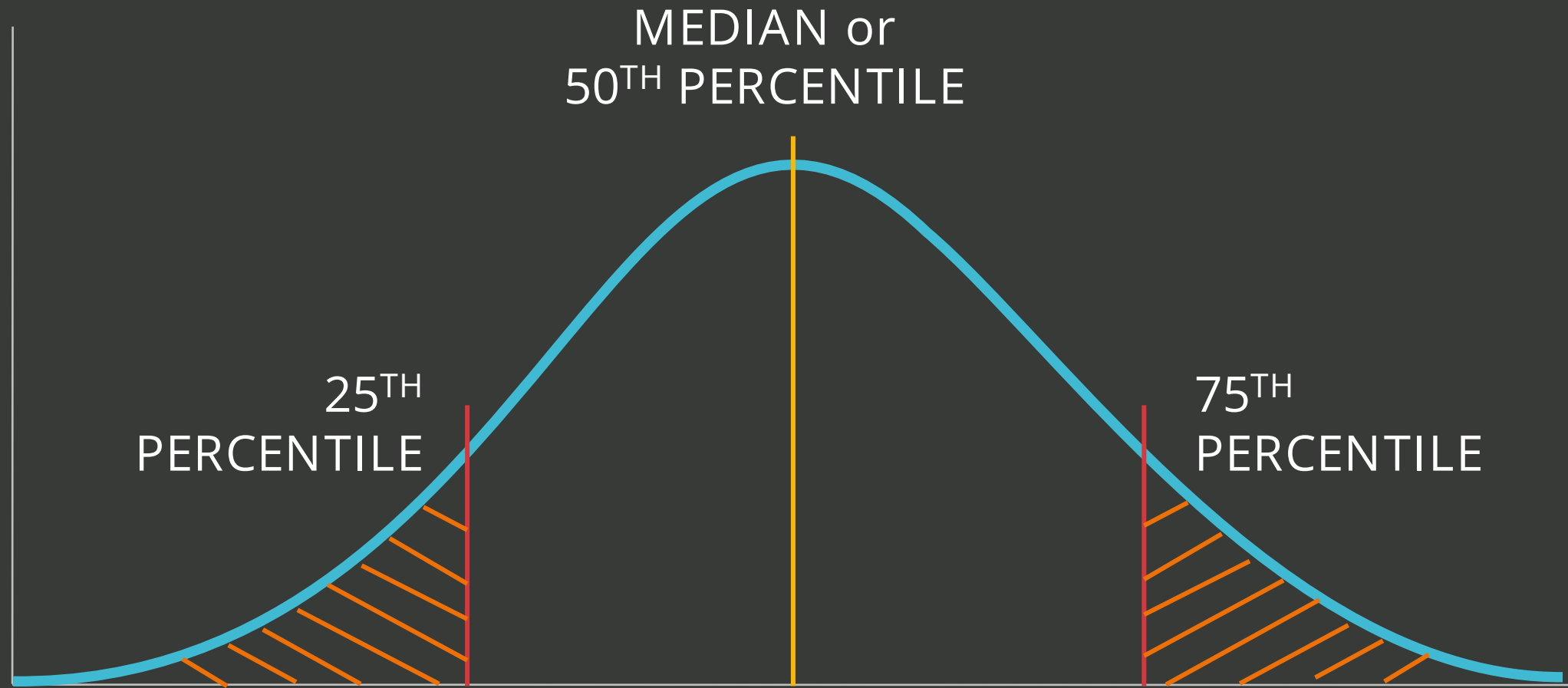
Resource: PSMJ Resources 2022 A/E Financial Performance Benchmark Survey Report

Choose Your Peers: Deltek



Normal Bell Curve

MEAN = AVERAGE



Benchmarking and Operational Levers

working on the business

Relevant Benchmarking for AE Firms



*A snapshot of
the current state*

Financial KPIs

Operational KPIs

Overhead Analysis

Staff Ratio Analysis

Compensation & Benefits

Business Development KPIs

Relevant Benchmarking for AE Firms

- Are we profitable?
- Is there enough hard backlog being worked on and invoiced for the number of staff?



Financial KPIs

Operational KPIs

Overhead Analysis

Staff Ratio Analysis

Compensation & Benefits

Business Development KPIs

Relevant Benchmarking for AE Firms

Operating Profit as a % Net Rev.

MEDIAN
18.3%

HP FIRMS
33.8%

Financial KPIs

Operating Profit \$
Net Revenue \$

Potential “Levers”

Operating Profit as a % Net Rev.

MEDIAN
18.3%

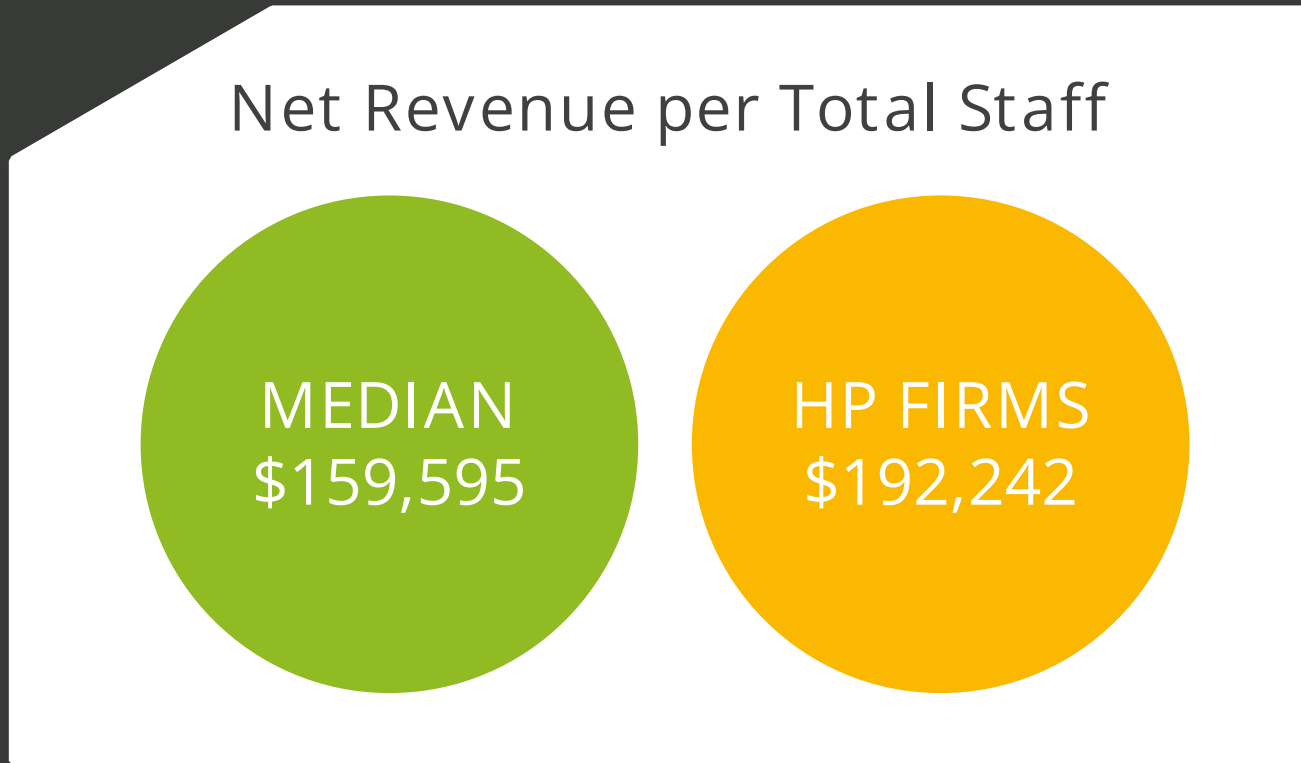
HP FIRMS
33.8%

Financial KPIs

Operating Profit \$
Net Revenue \$

- Overhead being managed?
- Cost of labor appropriate?
- Change orders being issued?

Relevant Benchmarking for AE Firms



Financial KPIs

Net Revenue \$
Total Staff #

Potential “Levers”

Net Revenue per Total Staff

MEDIAN
\$159,595

HP FIRMS
\$192,242

Financial KPIs

Net Revenue \$
Total Staff #

- Fees adequate to cover project labor and expenses?
- Appropriate staff levels?

Where to look for Operational “LEVERS” –
it’s in the MATH!

Net Revenue \$ / Total Staff #

Direct Labor \$ / Total Labor \$

Net Revenue \$ / Direct Labor \$

Relevant Benchmarking for AE Firms

- Is the staff chargeable on project work?
- Is the time spent on project work able to be invoiced?



Financial KPIs

Operational KPIs

Overhead Analysis

Staff Ratio Analysis

Compensation & Benefits

Business Development KPIs

Relevant Benchmarking for AE Firms

Utilization

MEDIAN
58.2%

HP FIRMS
64.2%

Operational KPIs

Direct Labor \$
Total Labor \$

Potential “Levers”

Utilization

MEDIAN
58.2%

HP FIRMS
64.2%

Operational KPIs

Direct Labor \$
Total Labor \$

- Are time sheets accurate?
- Is there adequate work available (backlog)?

Relevant Benchmarking for AE Firms

Direct Labor Multiplier

MEDIAN
3.23

HP FIRMS
3.67

Operational KPIs

Net Revenue \$
Direct Labor \$

Potential “Levers”

Direct Labor Multiplier

MEDIAN
3.23

HP FIRMS
3.67



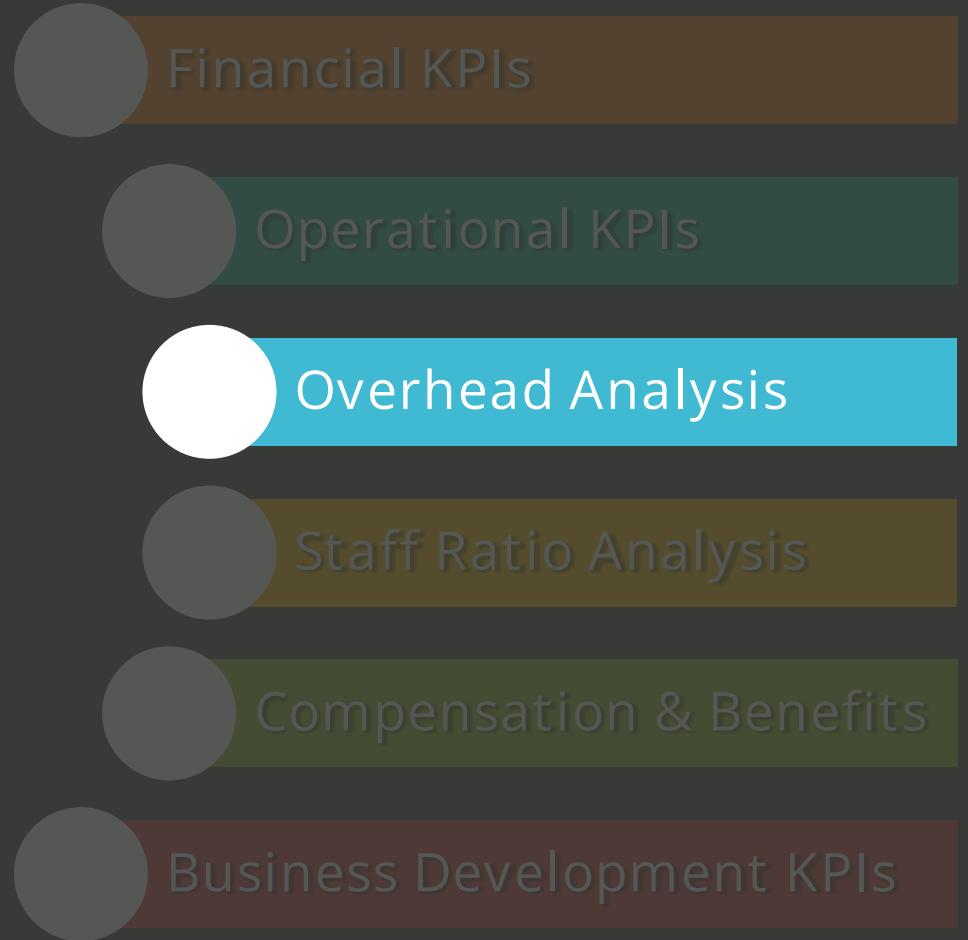
Operational KPIs

Net Revenue \$
Direct Labor \$

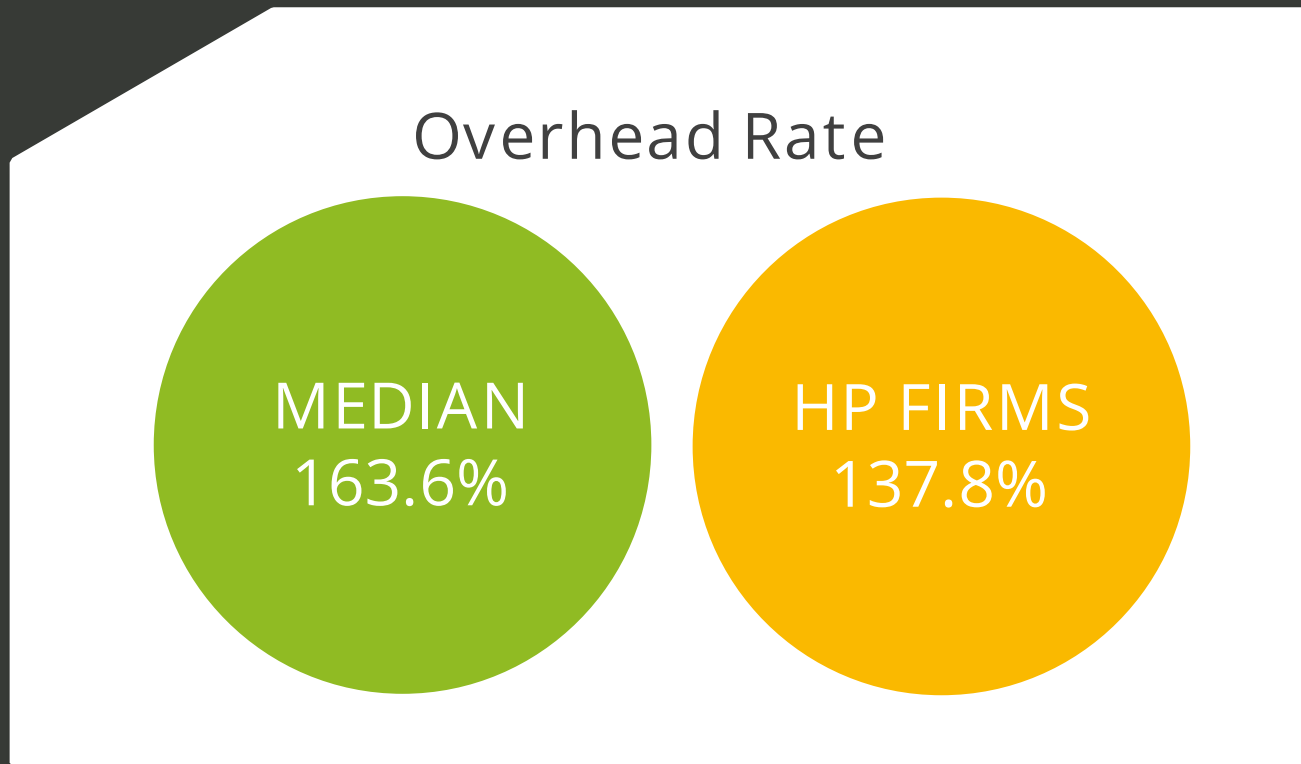
- Are project being managed efficiently?
- Are billing rates supporting project labor costs?

Relevant Benchmarking for AE Firms

- Is overhead being managed?
- Are we retaining staff?



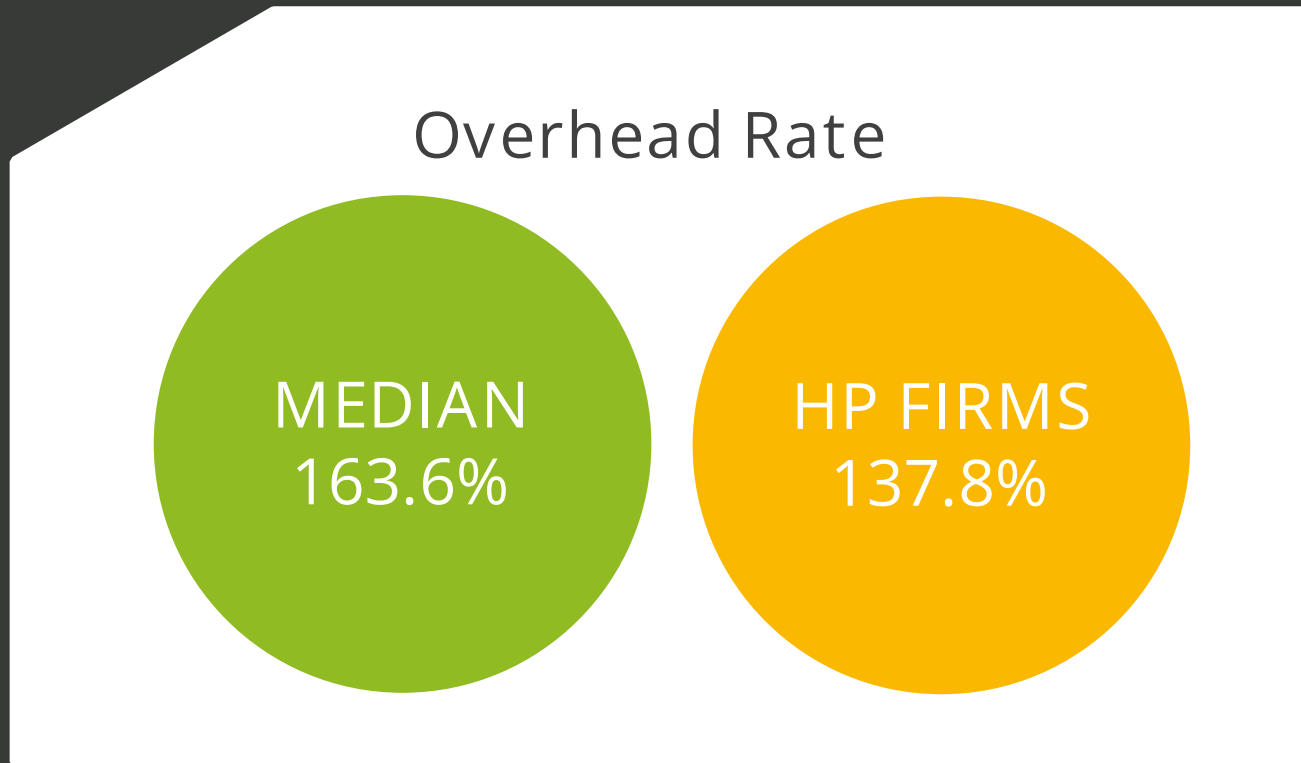
Relevant Benchmarking for AE Firms



Overhead Analysis

Overhead Expenses \$
Direct Labor \$

Potential “Levers”



Overhead Analysis

Overhead Expenses \$
Direct Labor \$

- Are indirect labor costs appropriate?
- Are time sheets accurate?

Relevant Benchmarking for AE Firms

Staff Turnover Rate

MEDIAN
14.7%

HP FIRMS
11.9%

Overhead Analysis

Departing Staff #
Beginning Total Staff #

Potential “Levers”

Staff Turnover Rate

MEDIAN
14.7%

HP FIRMS
11.9%

Overhead Analysis

Departing Staff #
Beginning Total Staff #

- Is your employer brand attracting and retaining talent?
- Is your compensation adequate?

Relevant Benchmarking for AE Firms

- Do we have enough project managers?
- Do we have sufficient support staff?

Financial KPIs

Operational KPIs

Overhead Analysis

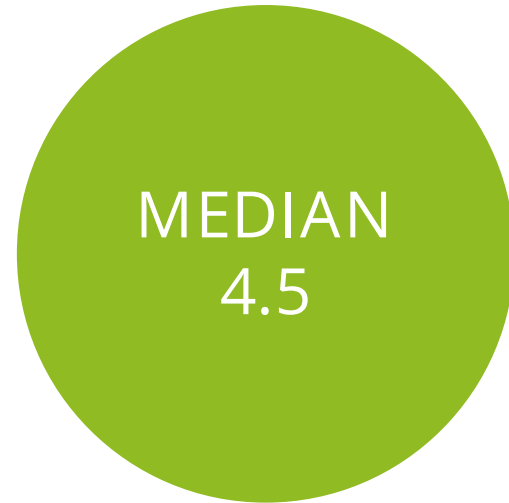
Staff Ratio Analysis

Compensation & Benefits

Business Development KPIs

Relevant Benchmarking for AE Firms

Technical Staff to Project Manager
Ratio

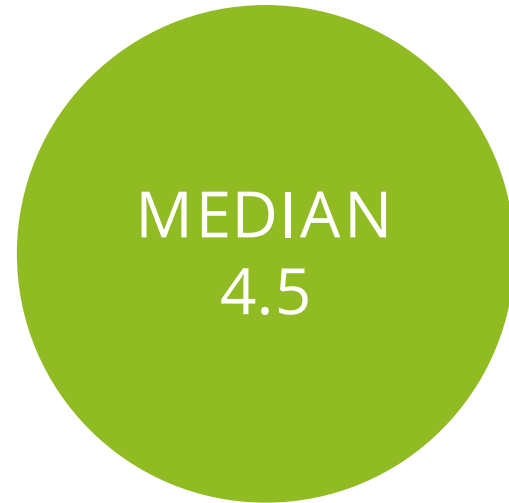


Staff Ratio Analysis

Technical Staff #
Project Managers #

Potential “Levers”

Technical Staff to Project Manager
Ratio



Staff Ratio Analysis

Technical Staff #
Project Managers #

- Clear definition of PM?
- Development path?

Relevant Benchmarking for AE Firms

Total Staff to Accounting Staff
Ratio

MEDIAN
27

Staff Ratio Analysis

Total Staff #
Accounting Staff #

Potential “Levers”

Total Staff to Accounting Staff
Ratio

MEDIAN
27



Total Staff #
Accounting Staff #

- Processes efficient?
- Appropriate staff skillsets?

Relevant Benchmarking for AE Firms

- Are employees paid comparable or above average to market rates?
- Is the firm offering a competitive bonus program?

Financial KPIs

Operational KPIs

Overhead Analysis

Staff Ratio Analysis

Compensation & Benefits

Business Development KPIs

Relevant Benchmarking for AE Firms

Average Compensation per Total Staff

MEDIAN
\$85,069



Compensation & Benefits

Total Salary \$
Total Staff #

Potential “Levers”

Average Compensation per Total Staff

MEDIAN
\$85,069



Compensation & Benefits

Total Salary \$
Total Staff #

- Is the ratio appropriate?
- Has a compensation study been done recently?

Relevant Benchmarking for AE Firms

Total Bonus/Incentives
as a % of DL

MEDIAN
22.7%



Bonus & Profit Sharing \$
Direct Labor \$

Potential “Levers”

Total Bonus/Incentives
as a % of DL



MEDIAN
22.7%



Bonus & Profit Sharing \$
Direct Labor \$

- Has the bonus plan been reviewed recently?
- Has a compensation study been done recently?

Relevant Benchmarking for AE Firms

- Are we winning work?
- Are we growing revenue?



Financial KPIs

Operational KPIs

Overhead Analysis

Staff Ratio Analysis

Compensation & Benefits

Business Development KPIs

Relevant Benchmarking for AE Firms

Capture Rate

MEDIAN
48.5%

Business Development KPIs

Proposals Awarded \$
Proposals Submitted \$

Potential “Levers”

Capture Rate



MEDIAN
48.5%

Business Development KPIs

Proposals Awarded \$
Proposals Submitted \$

- Are fees competitive?
- Are project proposals standing out?

Relevant Benchmarking for AE Firms

Gross Revenue Change

MEDIAN
9.1%

HP FIRMS
19.5%

Business Development KPIs

% change between past two years

Potential “Levers”

Gross Revenue Change

MEDIAN
9.1%

HP FIRMS
19.5%

Business Development KPIs

% change between past two years

- Have a Business Development strategy?
- Creating an exceptional client experience?

Setting Goals & Anticipating the Future

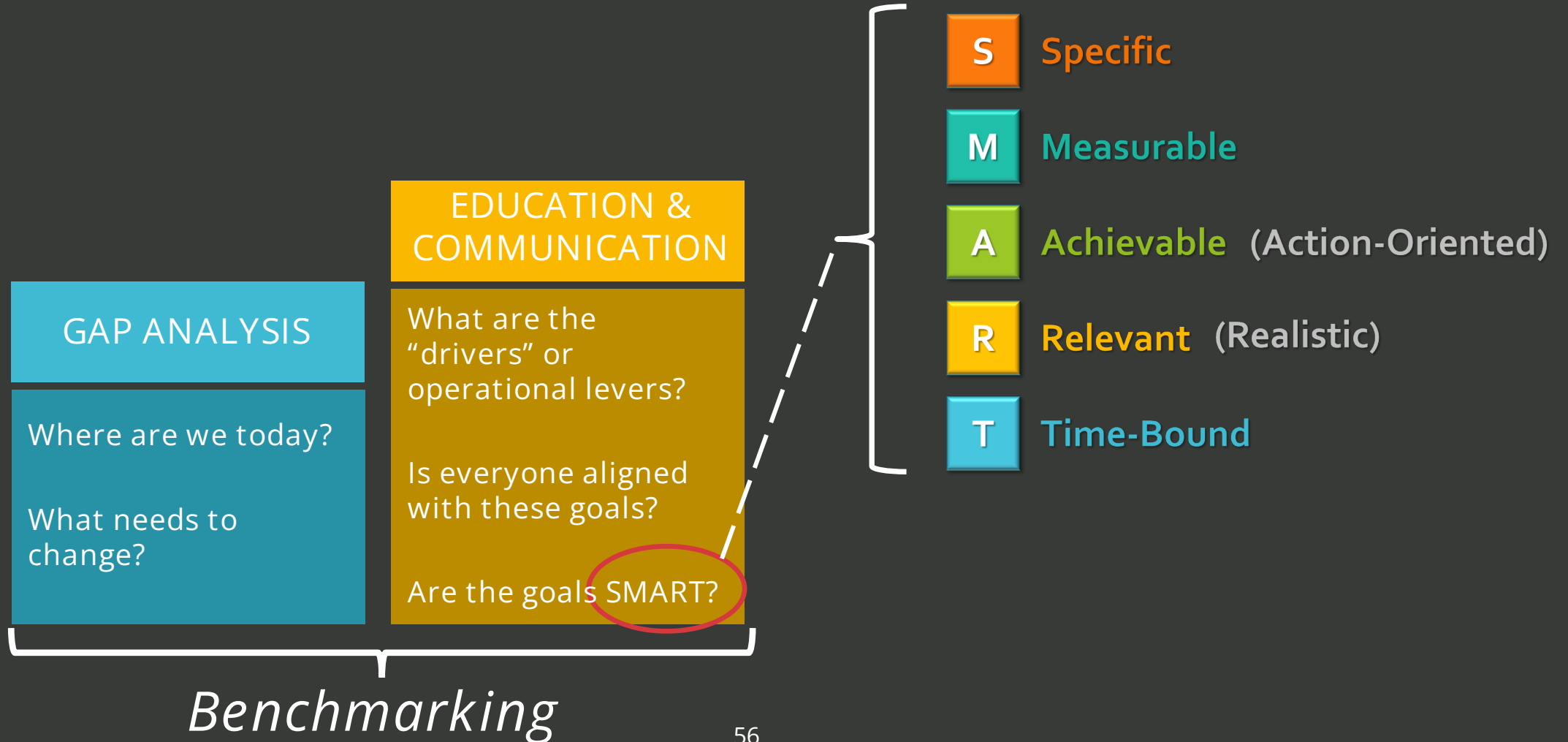
planning for the future

Polling Question

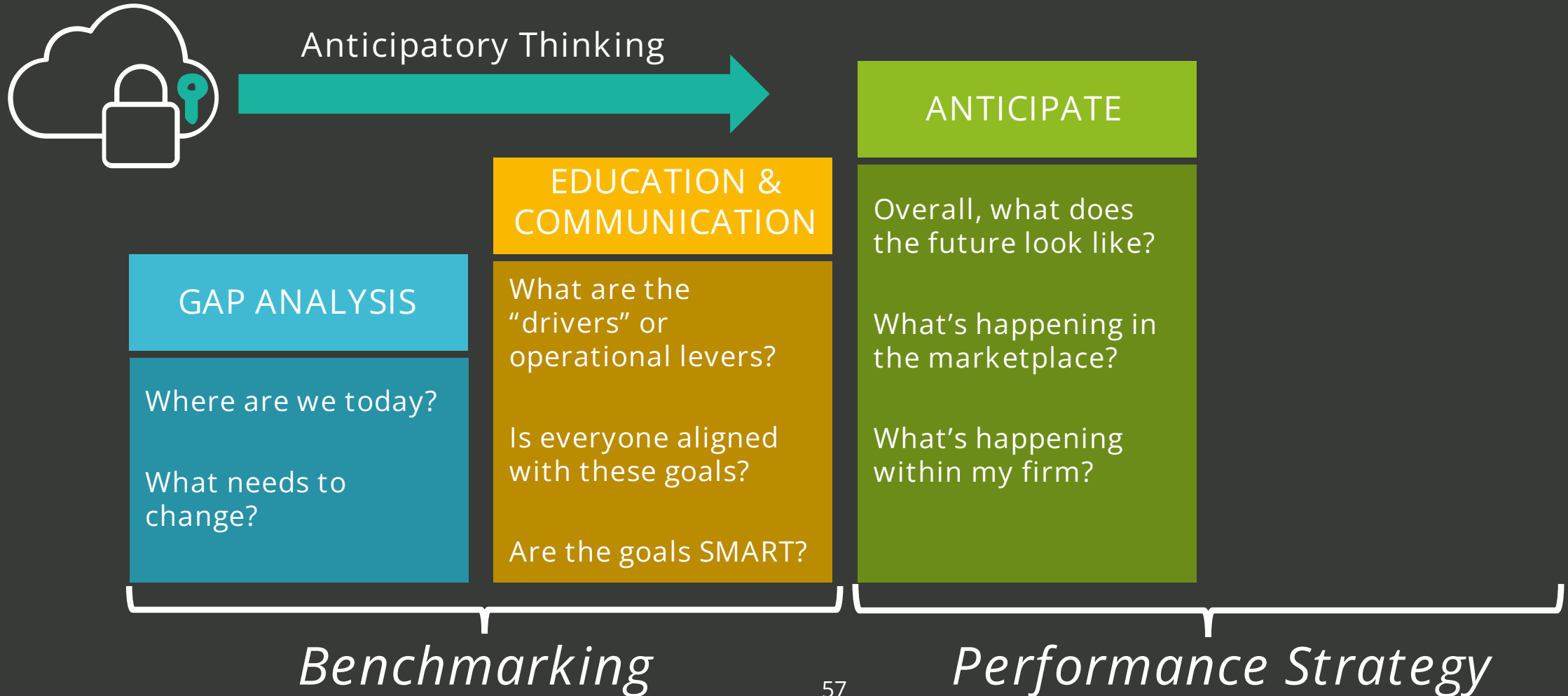
Which of the following is NOT important for setting performance goals?

- Understanding the impact of changing demographics
- Considering how technology changes the delivery of services
- Knowing how to set clear expectations and objectives
- Getting as many KPI's as possible to measure firm performance
- Tracking changes in regulations that may impact your firm

Planning for the Future



Planning for the Future

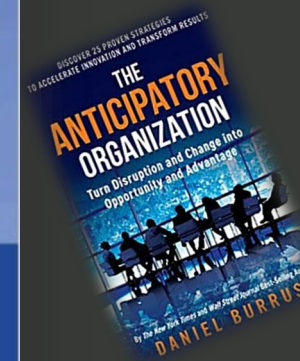


Anticipatory Thinking

- ✓ Demographics
- ✓ Technology
- ✓ Regulatory

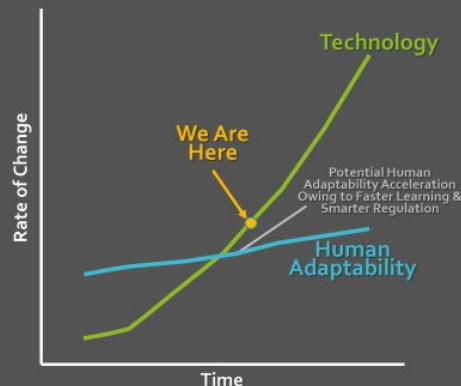


- ✓ Hard Assumptions
- ✓ Soft Assumptions



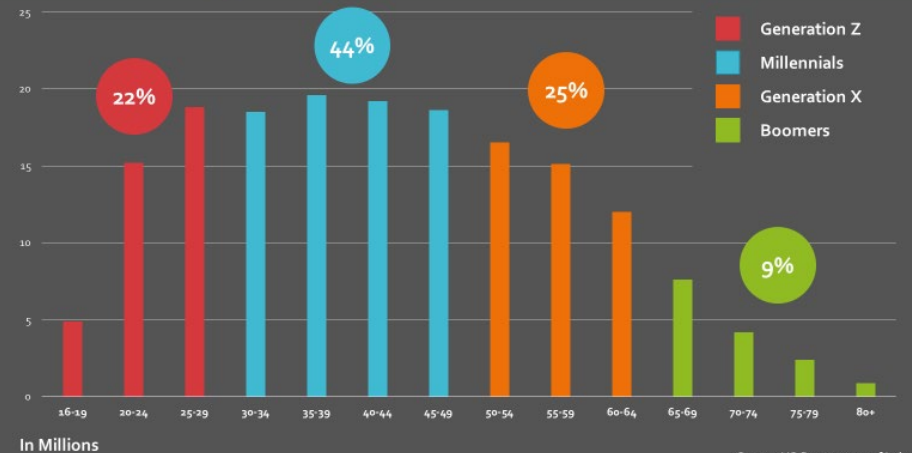
ANTICIPATORY LENS

TECHNOLOGY is Accelerating Faster Than Our Ability to Adapt

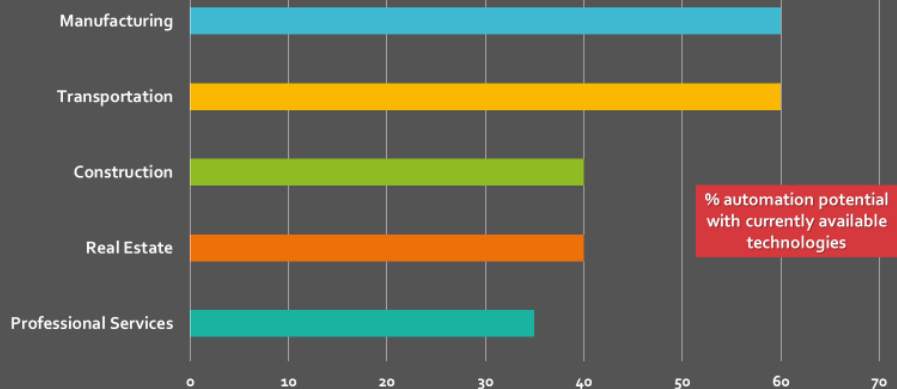


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US WORKFORCE IN 2030



AUTOMATION POTENTIAL OF SELECT SECTORS

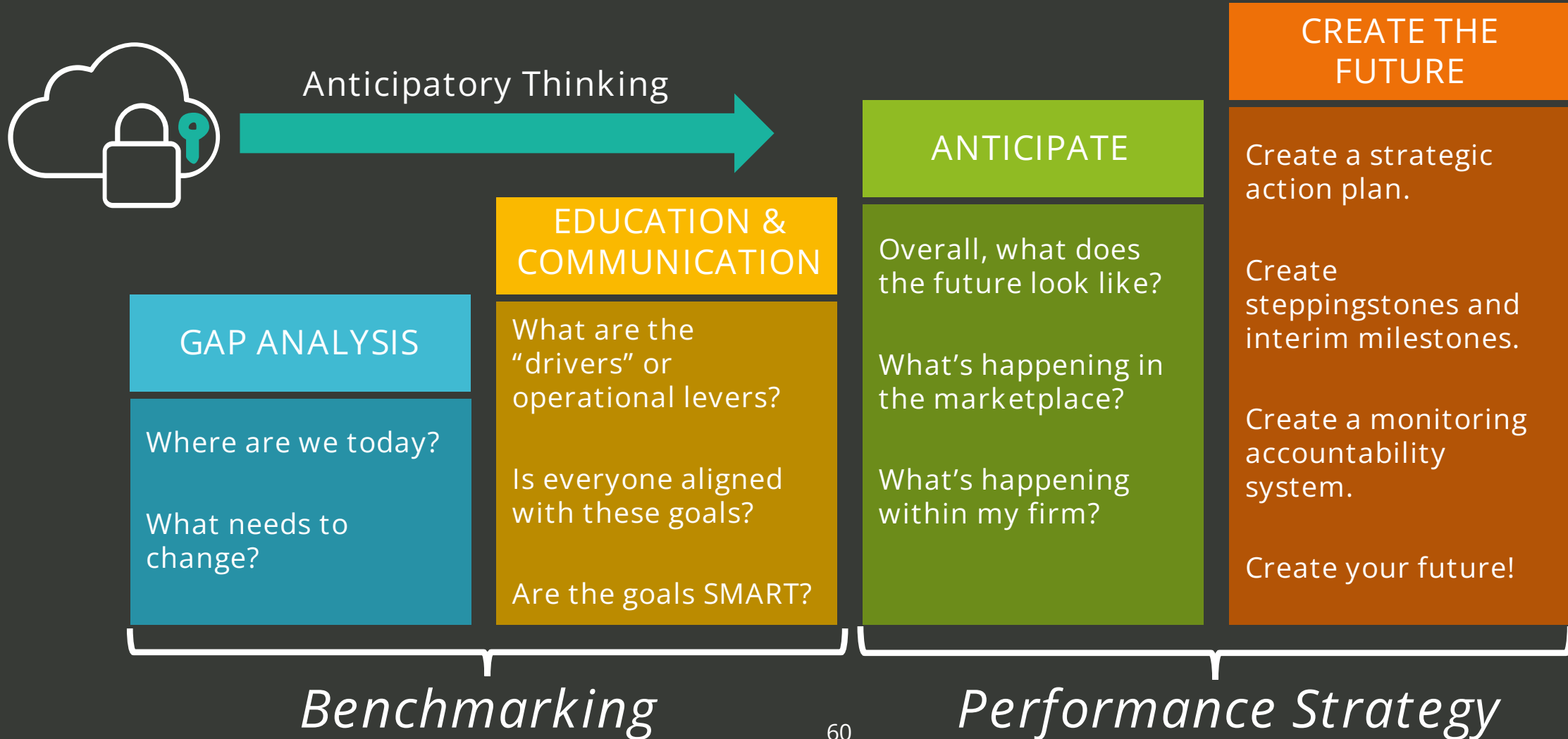


CONVERGENCE and DISRUPTION of Entire Construction Ecosystem



67

Planning for the Future



Questions?



Contact



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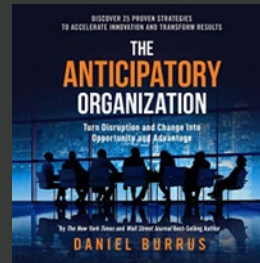
717.208.2919



<https://www.linkedin.com/in/jenniferknoxpe/>

Thank You!

If you would like us to send you a complimentary copy of The Anticipatory Organization, please let us know in the survey comments.



Stambaugh Ness

www.stambaughness.com



Kate Allen
PE, MBA

Director
AE Advisory

Kate brings over 25 years of experience in the AE industry on both the design side and the business side. Kate specializes in transition strategies and business improvement initiatives, drawing from her unique educational background as well as her experiences as an engineer, educator, entrepreneur, industry consultant, and business leader, working collaboratively with firms to anticipate and prepare for their future.

Professional Highlights

- BA in Psychology, BS in Mechanical Engineering, MBA
- MKK Consulting Engineers, Associate Owner
- Caveo Consulting Engineering, Co-Founder
- Deerns, Managing Director of Deerns USA
- BSA LifeStructures, National Engineering Director
- PSMJ Resources, Consultant
- Stambaugh Ness, Consultant



Jennifer Knox
PE, MBA

AE Advisory
Consultant

Jennifer has over 10 years of experience in construction, engineering and project management. Having worked in Fortune 500 companies and a small minority owned business, Jennifer leverages her diverse background and MBA to help firms build collaborative cultures to drive success.

Professional Highlights

- BS & MS in Civil Engineering, Executive MBA
- Professional Engineer, licensed in Pennsylvania
- The Hershey Company, Sr. Engineer & Project Manager
- Harnden Construction Services, Sr. Manager Strategy & Growth
- Stambaugh Ness, AE Advisory Consultant

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